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ABSTRACT

The final report of the Early Careers Study at Michigan State Univesity (MSU) at East Lansing is presented. This longitudinal study investigated the organizational socialization and assimilation processes experienced by 334 engineering and management graduates from both a traditional university (MSU) and a cooperative college with close ties to General Motors Corporation at the beginning of their working careers. The report presents comparative analyses of factors that differentially affect how newcomers "learn the ropes." Data were gathered and analyzed on the topics of: changes that socialization brings across time; sources and content domains that newcomers sample to learn more about organizational life; the people in the organizational setting who initiate learning; how socialization affects the knowledge level of newcomers; and the outcomes of the socialization process. Differences in the pattern of socialization were compared for new hires from the two different types of institution, for managers versus engineers, for mentored versus nonmentored newcomers, and for men versus women. Results include the following: there was a clear advantage for graduates with cooperative internship experiences; management graduates employed broader information seeking strategies while engineering graduates were more focused on their immediate tasks; women used more self-reliant learning strategies than expected; and mentoring did not seem to have profound effects on newcomer learning. An appendix lists socialization information acquisition items clustered by content domain. Tables are included. Contains 9 references. (SM)

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ED 307 824

The Socialization and Assimilation of College Graduates: How New Hires Learn the Ropes

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FOREWORD

The Early Careers Study is an investigation of the organizational socialization and assimilation processes experienced by college graduates beginning their working careers. This final report of the New Careers Study presents comparative analyses of factors that differentially affect how newcomers "learn the ropes." Differences in the pattern of socialization were compared for new hires from a traditional vs. a cooperative educational institution, for managers vs. engineers, for mentored vs. non-mentored newcomers, and for men vs. women. The results of the research documented in this report have policy implications for college administrators, placement officials, and organizational management with regard to the preparation of college graduates to assume productive organizational roles.

ACKNOWLEDGEMENTS

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Many people helped make this research possible. The research was conceived and designed in collaboration with Cheri Ostroff. Cheri Ostroff was instrumental in Phase I. David B. McKellin was instrumental in Phase II. Debra A. Major was responsible for conducting the analyses described in this final report. These contributions were all part of a successful team effort.

The conclusions of this report are solely the responsibility of the authors and do not necessarily reflect the views of the Collegiate Employment Research Institute.

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EXECUTIVE SUMMARY

The Early Careers Study explored the organizational socialization and assimilation processes of graduates beginning their careers. Data were collected from engineering and management graduates from both a traditional university and a cooperative college. The following are the study's most interesting results.

There was a clear advantage for graduates with cooperative internship experiences. They evidenced more appropriate and realistic learning strategies, they were more self-reliant, exhibited greater knowledge and understanding, and were better adjusted than their counterparts graduating from a traditional university.

Management graduates employed broader information seeking strategies, while engineering graduates were more focused on their immediate tasks. Although this more local task orientation may be appropriate for the engineering role, it suggests that management majors may develop career advantages through their broader understanding of the organization.

Women used more self-reliant learning strategies than was expected. They also reported being more knowledgeable about key socialization factors, but experienced greater stress.

Finally, mentoring did not seem to have profound effects on newcomer learning. There was, however, some evidence suggesting that mentors helped sensitize newcomers to important organizational factors.

The study's findings have many practical implications. First, universities could better prepare graduates for their future careers by providing more cooperative internship experiences. Organizations would also benefit by creating a more qualified applicant pool from which to recruit and select new employees. College placement offices could assist new graduates by offering orientation

programs designed to familiarize initiates with the aspects of organizational life most important for success. Programs should focus on sharpening learning skills and teaching initiates how to adapt in the work setting. More specifically, the engineering curricula could be improved by placing greater emphasis on interpersonal and communication skills. Finally, to effectively intervene in socialization, organizations must act within the first few days or weeks of employment to help newcomers develop effective information gathering techniques.

INTRODUCTION

"Learning the ropes." "Breaking in." These phrases, and many others, describe the process by which newcomers learn about what is important in their new organizational settings. More formally, organizational socialization is the process by which new employees learn about their role within an organization. This process occurs whenever a person crosses a definite organizational boundary, thereby changing the organizational context within which they work. Therefore, socialization occurs when someone becomes a new employee in a company, transfers between departments, or receives a promotion. Socialization which occurs when an employee is reassigned within an organization is referred to as resocialization. The process on which this report focusses, however, is the socialization of new employees into the organization, or newcomer socialization.

During the socialization process newcomers attempt to make sense of their new work environment. Beginning a new job exposes newcomers to the uncertainties of learning what is expected of them on the job, how to deal with coworkers, and what organizational events they should recognize as significant. Through socialization, newcomers begin to cope with these uncertainties by finding out "how things work." Gradually, as they develop an appreciation and understanding of the complexities of their work environment, newcomers learn to interpret and react to organizational features, events, and processes like experienced organizational members and the uncertainty which they initially experienced dissipates.

Why is socialization important? The primary function of the socialization process is that newcomers learn the expectations for their new job and social network. These expectations include learning and adopting the values of their work group and organization and how the employee will fit in this system. The

primary goal of socialization, then, is to develop a functional, productive worker as quickly as possible, since the more rapidly the new role is assimilated, the sooner an individual contributes to the productivity of the organization. However, although an organization may benefit from a well-socialized employee through higher employee productivity, more committed employees, and lower employee turnover, newcomers can profit from this process as well. Specifically, newcomers who are properly assimilated into their new roles are thought to have lower stress levels related to their jobs, be more satisfied with their jobs, and generally are more likely to feel a sense of belonging in their new positions than those who are less well adapted. Therefore, socialization is an important feature of a newcomer's early job tenure and long-term commitment, both for the organization and for the individual.

The socialization process, as we have seen, is very important. However, although this is an easy process to describe, very little research has systematically investigated how it actually occurs. This has been a major problem in the socialization literature. A great deal of theoretical work describes different stages of socialization and suggests how organizations might structure early experiences for newcomers. Surprisingly little research, however, has looked specifically at what and how newcomers learn about their new jobs. For instance, we still do not know how newcomers obtain job information from other people, from objective referents, or to what extent they must initiate their own learning. A basic understanding of how these activities proceed would be useful to organizations in developing programs to integrate newcomers, in possibly assigning them to mentors, and generally in helping to recognize how employees in different specialties react to new job experiences. Educational institutions might find such research valuable in helping them to provide

realistic previews of possible job experiences for graduating students, as well as in structuring or encouraging students to become involved in cooperative education programs or part-time employment.

Traditionally, socialization theory has portrayed this process as a series of discrete stages through which all organizational newcomers proceed until they become full-fledged organizational members. However, while such a theory is conceptually appealing, it fails to explain what newcomers learn about their jobs, as well as the complex dynamics involved in how they learn about it. Therefore, in order to account for the dynamic nature of this learning, the Early Careers Study conceptualizes socialization as the process by which newcomers learn about four basic aspects or domains of their new organizational settings. These domains include task activities, role behaviors, work group norms, and organizational culture.

First, newcomers must learn what tasks are required by the new position and how to do them. Some of the first things new employees learn upon assuming a new position are their basic job duties and procedures, what their priorities are, how to handle equipment, how to deal with routine problems, and how to obtain the information and resources needed to meet their responsibilities. Mastery of these task elements is essential for the newcomer to perform his or her job well. Expectations inherent in the new organizational role are a second feature of the work environment with which the newcomer must become familiar. Given its level and position in the organization, each job has associated with it certain expectations about what constitutes appropriate behavior. For example, newcomers must learn when to act alone or seek approval, what is expected of them beyond task performance, to what extent they can modify their duties, and what behavior and demeanor is appropriate for their position. Finding out what these

expectations are and fulfilling them is one way that a newcomer begins to "fit into" an organization. A third important facet of the work context which newcomers must learn are work group norms. Learning how to interact with one's coworkers, understanding the existing work group social structure, and discerning colleagues' expectations for job performance are crucial both in getting one's work accomplished and in building good personal relationships that make the workplace more hospitable. Finally, newcomers must learn about the organizational culture. Understanding the policies, practices, procedures, power structures, and tacit understandings among established organizational members can help new employees make sense of why things are done as they are. Furthermore, developing an appreciation for organizational myths, mission statements, and values aids newcomers in making sense of their new job context. Overall, organizational newcomers must learn how to perceive, interpret, and respond to features and events in their new setting in ways that are consistent with the framework used by current organizational members.

Along with job content, the issue of how newcomers learn about their new job settings is important in the socialization process. Although not an exhaustive list, the primary sources newcomers are thought to use in acquiring information about their jobs include mentors, supervisors, coworkers and peers, observation of others, trial and error experimentation, and objective sources such as manuals, training, etc. Within these sources, the value of the information available from each source may vary--different sources can be more or less helpful or, with person sources, be more or less active in initiating information exchange. Therefore, the way in which newcomers get information about their new job setting can have a strong influence on how well and how long it takes for them to become fully assimilated into the organization.

Finally, newcomer socialization is a dynamic process, changing over time. Most socialization is thought to occur during the first few months of a newcomer's tenure in an organization. However, the process may take more or less time depending on the individuals and work settings involved. Therefore, while there is some consensus about what newcomers learn about their new work setting and how they learn it, how long this assimilation process takes is not well understood. Because the factors involved in this learning are constantly changing, it has been very difficult to identify when key aspects of this process become most important.

To understand some of the important factors affecting the socialization process, the goal of the Early Careers Study was to find out how newcomers learn about their new organizational settings. First, this study attempted to examine changes in the socialization process and assimilation that may occur over time. Since socialization is a dynamic process, one would expect that newcomers will learn more and become better acclimated to their new surroundings the longer their tenure in the organization. A second purpose of this study was to identify how newcomers learn about their jobs. Specifically, this study attempted to discover what sources and content domains newcomers actually sample to learn about organizational life. The third question this study sought to answer is whether the newcomer or organizational incumbents take the initiative in newcomers' learning. Fourth, this investigation assessed the effects of differences among newcomers on how much they feel they knew about their new jobs and organizations. Finally, this study attempted to examine what are the organizationally-relevant outcomes of the socialization process.

In order to answer these questions, the New Career Study examined several characteristics which were thought to affect how newcomers become acclimated to

their new roles. Specifically, four newcomer characteristics were examined in this study: the type of education the newcomer received (traditional vs. cooperative), the newcomer's professional field (management vs. engineering), gender, and whether or not the newcomer was guided in his or her early organizational experiences by a mentor.

THE STUDY

One of the key factors related to socialization is that it occurs over time. To capture this process, the Early Careers Study was longitudinal. Phase I data were collected from organizational newcomers as they began their careers, within the first three months in their new jobs. Phase II data were collected approximately six months later. In the section that follows, the background of participants in this study will be described, followed by a description of the measures used.

Participants

Participants for the Early Careers Study were recruited from graduating seniors in the engineering and business programs at Michigan State University and GMI Engineering and Management Institute, a cooperative education institution with strong ties to General Motors Corporation. Initial contacts with these graduates were made through letters requesting their participation in the study. As an inducement to take part, graduates were informed that participants who completed and returned both Phase I and Phase II questionnaires would be eligible for a drawing to award one $100 cash prize. Of those expressing an interest in this project (N = 496), 67% returned completed Phase I questionnaires (n = 334), and of this sample 66% (n = 219) returned Phase II questionnaires as well. At the conclusion of the study, the cash prize was awarded to a study participant, who

was selected by a computerized random selection program.[1]

Table 1 presents sample characteristics for participants returning Phase I data broken down for MSU and GMI graduates, and for the total sample. Table 2 presents similar information for participants returning Phase II data. Overall, the mean age of the sample was 23.25, with a large majority of the participants being either 22 or 23 years old. Of the Phase I respondents, approximately 57% were male and 43% were female. This proportion remained fairly stable for Phase II participants, in which 55% were male and 45% were female. With respect to professional field, 46% of Phase I respondents were managers, 52% were engineers, and 2%, all of whom were MSU graduates, majored in other areas. These statistics were identical for Phase II.

One area in which there were substantial differences between institutions was number of previous career-related work experiences, such as internships. Though MSU graduates typically had more work experience in general, this experience was primarily gained through part-time and summer jobs--experience which usually is not considered career-oriented. On the other hand, GMI graduates, though lacking part-time and summer experience, had substantially more experience working in formal internship programs than did MSU graduates. This was expected, since graduates of GMI's cooperative education program are involved in regular, planned internship experiences throughout their education. One final variable thought to affect how newcomers learn about their new roles is whether or not they have a mentor in the organization. A mentor is someone higher in the organizational structure who assists the neophyte in learning the way things are done. For both Phase I and Phase II samples, approximately 31% of the respondents reported

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[1]Funds for the participation award were not provided by the Collegiate Employment Research Institute of Michigan State University.

Table 1

Study Participant Background Characteristics - Phase I

	MSU	GMI	Total
Participants	227 (68%)	107 (32%)	334 (100%)
Sex			
Male	133 (59%)	57 (53%)	190 (57%)
Female	94 (41%)	50 (47%)	144 (43%)
Age			
21	23 (10%)	0 (0%)	23 (7%)
22	88 (39%)	19 (18%)	107 (32%)
23	64 (28%)	73 (68%)	137 (41%)
24	17 (8%)	10 (9%)	27 (8%)
25 +	33 (15%)	5 (5%)	38 (11%)
Not reported	2 (1%)	0 (0%)	2 (1%)
Professional Field			
Management	142 (63%)	13 (12%)	155 (46%)
Engineering	80 (35%)	94 (88%)	174 (52%)
Other	5 (2%)	0 (0%)	5 (2%)
Mentor			
Yes	77 (34%)	28 (26%)	105 (31%)
No	137 (60%)	79 (74%)	216 (65%)
Not reported	13 (6%)	0 (0%)	13 (4%)

(table continued)

Table 1 (cont.)

Study Participant Background Characteristics - Phase I

	MSU	GMI	Total
Internships			
0	119 (52%)	0 (0%)	119 (36%)
1-2	89 (39%)	4 (4%)	93 (28%)
3-7	19 (8%)	3 (3%)	22 (7%)
8-15	0 (0%)	100 (93%)	100 (30%)
Full-time Jobs			
0	57 (25%)	61 (57%)	118 (35%)
1-2	33 (15%)	10 (9%)	43 (13%)
3 +	12 (5%)	2 (3%)	14 (4%)
Not reported	125 (55%)	34 (32%)	159 (48%)
Part-time jobs			
0	10 (4%)	50 (47%)	60 (18%)
1-2	69 (30%)	38 (36%)	107 (32%)
3-12	101 (44%)	3 (3%)	104 (31%)
Not reported	47 (21%)	16 (15%)	63 (19%)
Summer jobs			
0	11 (6%)	60 (56%)	71 (21%)
1-2	79 (35%)	6 (6%)	85 (25%)
3-7	87 (38%)	2 (2%)	89 (27%)
Not reported	50 (22%)	39 (36%)	89 (27%)

Note. Percentages may not sum exactly to 100% due to rounding.

Table 2

Study Participant Background Characteristics - Phase II

	MSU	GMI	Total
Participants	148 (68%)	71 (32%)	219 (100%)
Sex			
Male	83 (56%)	37 (52%)	120 (55%)
Female	65 (44%)	34 (48%)	99 (45%)
Age			
21	16 (11%)	0 (0%)	16 (7%)
22	61 (42%)	12 (17%)	73 (34%)
23	43 (29%)	51 (72%)	94 (43%)
24	8 (5%)	6 (9%)	14 (6%)
25 +	19 (13%)	2 (3%)	21 (10%)
Not reported	1 (1%)	0 (0%)	1 (1%)
Professional Field			
Management	92 (62%)	8 (11%)	100 (46%)
Engineering	51 (35%)	63 (89%)	114 (52%)
Other	5 (3%)	0 (0%)	5 (2%)
Mentor			
Yes	43 (29%)	16 (23%)	59 (27%)
No	95 (64%)	55 (77%)	150 (68%)
Not reported	10 (7%)	0 (0%)	10 (5%)

(table continued)

Table 2 (cont.)

Study Participant Background Characteristics - Phase II

	MSU	GMI	Total
Internships			
0	84 (57%)	0 (0%)	84 (38%)
1-2	54 (36%)	2 (3%)	56 (26%)
3-7	10 (7%)	3 (4%)	13 (6%)
8-15	0 (0%)	66 (93%)	66 (30%)
Full-time Jobs			
0	44 (30%)	43 (61%)	87 (40%)
1-2	17 (11%)	7 (10%)	24 (11%)
3 +	8 (5%)	0 (0%)	8 (4%)
Not reported	79 (53%)	21 (30%)	100 (46%)
Part-time jobs			
0	7 (5%)	36 (51%)	43 (20%)
1-2	45 (30%)	23 (32%)	68 (31%)
3-12	65 (44%)	2 (3%)	67 (31%)
Not reported	38 (26%)	10 (14%)	48 (22%)
Summer jobs			
0	8 (5%)	43 (61%)	51 (23%)
1-2	53 (36%)	5 (7%)	58 (26%)
3-7	39 (38%)	1 (2%)	58 (26%)
Not reported	30 (20%)	21 (30%)	51 (23%)

Note. Percentages may not sum exactly to 100% due to rounding.

reported having a mentor in their organizations, with a greater proportion of MSU graduates having them (34%) than GMI graduates (26%).

Survey

In order to measure how much newcomers believed they had learned about each of the domains of their work context, how they learned about them, and how they were reacting to the process of adjusting to their new jobs, a survey was developed and administered during both Phase I and Phase II of the study. Important concepts that were addressed by this instrument are described below.

Mentor relationship. Respondents were asked to indicate whether or not they had a mentor who had helped them learn about their new job. A mentor was defined for subjects as "someone at a higher level than you (in the organization) who has helped you by taking you 'under their wing,' even though they were not formally required to do so," and who was not the participant's immediate supervisor.

Socialization information acquisition. This measure assessed how much newcomers believed they learned about the task, role, group, and organizational domains from each of the six potential information sources described previously. Using existing socialization literature to identify the important features of each domain (cf. Feldman, 1981; Fisher, 1986), this measure consisted of 33 items that asked questions about the task, role, group, an organizational domains. The task, role, and group domains were assessed by 8 items each, and the organizational domain by 9 items. Respondents were not made aware of the four conceptual domains represented by the items. (Items clustered by domains are reported in Appendix A.)

The measure was presented in matrix form and consisted of a random sequence of the 33 items assessing specific domain features arrayed against the six potential information sources--mentor, supervisor, co-workers, observation

(watching others), trial and error, and objective referents (e.g. manuals). In addition to the mentor definition, each of the other sources was defined for participants as follows: Supervisor -- your immediate supervisor or boss, Co-worker -- a member of your work group or other employee at your level or lower, Observation -- learning by watching how others do things, Trial and error -- experimenting by trying different things, and Objective Referents -- learning from a manual about policies, procedures, jobs, etc. or learning from formal organizational training or orientation. Participants were asked to rate how much information they acquired from each source about each feature using a 5-point scale ranging from "a great deal of information (5)" to "no information (1)." Participants without mentors were asked to omit ratings for that source. Overall, this procedure yielded 198 ratings for respondents with mentors (33 items X 6 sources) and 165 ratings (33 items X 5 sources) for those without mentors. Summary scores for this measure were computed by summing the item ratings for each of the four domains by each of the six (with mentors) or five (without mentors) sources. This resulted in a summary score indicating how much information was acquired about the task, role, group, and organization from each potential source. Coefficient alpha reliabilities were computed for each of the domain by source scores. Internal consistencies ranged from .80 to .91 with a mean of .85 for Phase I responses, and ranged from .77 to .91 with a mean of .86 for Phase II.

Proaction. Respondents were asked to indicate, relative to themselves, who among the three person-based sources initiated learning activities. This measure addressed overall domains, not specific features, and considered only person sources (mentor, supervisor, coworkers) since impersonal sources, by definition, require newcomer proaction. Participants rated the three personal sources for

each domain description using a five-point scale, ranging from "they almost always initiated contact to give me information (5)" to "we initiated contact an equal amount (3)" to "I almost always initiated contact to get information (1)."

Knowledge. Participants were asked to indicate how much they felt they knew about each of the 33 features of the job using a five-point scale, ranging from "a very great amount (5)" to "a very little amount (1)." Scores for this measure were computed by examining respondents' mean knowledge ratings across all items. Reliability coefficients for this scale were found to be .94 for Phase I, and .92 for Phase II.

Assimilation outcomes. In order to assess how well they were assimilating into their work environments, participants in this study were asked to answer several sets of questions related to how they were adjusting to their new jobs. These are described below:

1. Adjustment - Based on a report by Fisher (1982), respondents were asked to indicate, on a 7-point scale, the extent to which they felt they had adapted to their work situation, were trusted by others, and felt independent. Alpha coefficients for this scale indicated that internal reliability for both Phase I and Phase II data was .84.
2. Organizational commitment - Participants indicated how loyal they felt toward their company by rating on a 7-point scale the extent to which they agreed or disagreed with 8 statements describing possible reactions to working for their company (Mowday, Steers, & Porter, 1979). Internal consistency reliabilities for this scale were .89 for both Phase I and Phase II.
3. Stress - Based on an adaptation of scales developed by Caplan (1980), respondents were asked to indicate how frequently they felt symptoms indicating physical stress, such as dizziness, poor appetite, or upset

stomach; or psychological stress, such as having trouble getting up in the morning, not feeling qualified for their job, or generally feeling stressed by their job. Alpha coefficients for Phase I and Phase II data were .76 and .77 for the physical stress scale, .75 and .77 for the psychological stress scale, and .83 and .84 for the composite scale, respectively.

4. Performance - Participants were asked to assess how effective they were in completing their tasks using a 5-point scale. This measure included items such as "How much do you produce compared to others," "How good is the quality of the products or services you produce," and "Compared to other employees doing similar work, how would you rate your overall performance?" An internal consistency alpha coefficient of .71 was obtained for Phase I of the study, while a coefficient of .74 was found for Phase II.

5. Turnover intention - Subjects rated on a 7-point scale how often they thought about quitting, whether they were actively looking for a new job, and the probability that they would look for a new job in the next year (Cammann, Fichman, Jenkins, & Klesh, 1979; Seashore, Lawler, Mirvis, & Cammann, 1982). Reliability coefficients for this scale were .92 for both Phase I and Phase II responses.

6. Job satisfaction - Respondents were asked to rate how fulfilled and content they were with various aspects using a five-item scale based on previous work by Louis, Posner, & Powell (1983), Feldman (1976), and Fisher (1982). Coefficient alpha reliability for this measure was found to be .91 for Phase I data, and .95 for Phase II data.

7. Demographics - Demographic characteristics were also examined as a part of this survey. Items were included regarding subjects' gender, age, professional field, the institution from which they graduated, and what types

of previous jobs they had held. These data are presented in Tables 1 and 2.

RESULTS AND DISCUSSION

Data were analyzed to address the study's key research questions: a) What changes does socialization bring across time? b) What sources and content domains do newcomers sample to learn more about organizational life? c) Who in the organizational setting initiates learning? d) How does socialization affect the knowledge level of newcomers? e) What are the outcomes of the socialization process?

What changes does socialization bring across time?

To address the first research question concerning changes across time, t-tests comparing Phase I to Phase II responses were conducted. These anaiyses yielded few meaningful differences. That is, participants' responses during Phase I did not differ significantly from Phase II responses. This suggests that at the time of the first phase of data collection newcomers had already established their information seeking strategies and patterns of initiation, acquired knowledge, and assimilation outcomes. Although questionnaires were administered as soon as possible after employment began, most of these data were gathered after newcomers had been on the job for 10 to 16 weeks. This information is valuable because it suggests that newcomers establish patterns of learning very quickly, more quickly than previously considered. The practical implication of this finding is that if organizations hope to facilitate the development of effective learning strategies, they must intervene within the earliest few weeks, or possibly days, of newcomer employment.

Because no meaningful changes across the six month time lag were detected, Phase I and Phase II responses were averaged to provide more stable and reliable measures. Study participants were then divided into the following groups to

consider the key research questions: a) GMI vs. MSU, b) managers vs. engineers, c) males vs. females, and d) mentored vs. non-mentored newcomers.

What sources and content domains do newcomers sample?

Analysis of information seeking strategy by college. Statistical breakdown analyses were conducted to examine differences in the information seeking strategies of the four contrast groups. First, GMI graduates' responses were compared to MSU graduates' responses to explore differences in the information sources and content areas each group utilized. The prior experience of GMI graduates was expected to be an asset and enhance the learning process. Results, shown in Table 3, revealed that MSU graduates used the personal sources--mentors, coworkers and supervisors--more frequently than GMI graduates for all content domains. MSU graduates were especially dependent on supervisors for information. Reliance on personal sources is probably a result of MSU graduates' relative lack of work experience, as compared to GMI graduates. This type of information seeking strategy may be indicative of more insecure and uncertain newcomers, as GMI graduates evidenced greater self-reliance.

MSU graduates also reported greater use of objective referents for information from all content domains. This result indicates an inability to differentiate among sources for the one best suited to provide information on a given content domain. For example, information about role and group is not likely to be found in an objective referent, such as a company training manual. This finding also reveals that MSU graduates tended to "play by the rules," in that the sources most frequently used by these newcomers are formal and organizationally sanctioned. For information relevant to every content domain, MSU graduates consulted supervisors and objective referents. These sources are most likely to provide organizationally prescribed information and describe

things as "they ought to be," rather than how they actually are.

Conversely, the results revealed that GMI graduates made more frequent use of the objective information seeking methods, observation and trial and error. These strategies are more likely to elicit accurate information on how things in the company actually function. The GMI group most often employed observation for information about the work group and organization, while primarily using trial and error for information related to the task and role domains. This indicates an awareness of which methods are likely to be best to gather specific and realistic information. GMI graduates' more substantial amount of internship experience is evidenced in this finding. It shows that they have learned what methods are best suited to learn those things that will allow them to become acclimated quickly. GMI graduates' reliance on more self-reliant strategies also illustrates greater confidence and less need for encouragement and reinforcement from organizational incumbents. The GMI group entered the organization closer to becoming fully functional than the MSU group, at least in terms of their information seeking strategies.

Analysis of information seeking strategy differences by major. A second analysis was conducted to compare the information seeking strategies of managers and engineers. Results, shown in Table 4, revealed that managers used all sources more frequently than engineers. Engineers tended to have a more locally oriented focus, concentrating more on their tasks than on the organization as a whole. This may be expected given the nature of an engineer's job, but such a narrow focus is likely to make engineers less well adapted than managers over the long term. This problem may be due to a shortcoming in the education of engineers in that interpersonal skills and an emphasis on the "big picture" are often neglected.

Table 3
Differential Use of Information Sources:
GMI vs. MSU[a]

Type of Information	Source of Information					
	M	C	S	R	O	T
TASKS:						
tasks, duties, assignments			+	+		
how to deal with red tape				+	*	*
standard operating procedures	+		+	+		*
priority of tasks	+	+		+		
how to perform tasks & duties			+	+	*	
how to handle problems	+		+	+		
where to obtain information for job			+	+		*
how to use equipment or tools for job	+		+			
ROLE:						
how to fit in company			+	+	*	
how much can make own rules				+	*	*
when can act alone						
how to act		+	+	+		
what responsibilities are				+		*
what is expected on job				+		
how much can define own tasks				+		*
how much authority to do job				+		*
GROUP:						
how to act & behave in group			+	+		
how to get along with coworkers		+	+	+		
group members with status			+	+	*	+
role of group in organization				+	*	
how work is done in group				+	*	
group belief re quantity & quality of work			+	+		
how coworkers feel about job			+		*	
atmosphere of interpersonal relations			+	+		
ORGANIZATION:						
goals & objectives of organization			+	+	*	
who has power in company		+	+	+	*	
organizational policies, procedures, rules		+	+	+	*	
management's beliefs re workers						
norms & values of company		+	+	+		
special language of company			+	+	*	
channels of authority				+		
ropes for getting ahead				+	*	
organizational legends, myths, & stories				+		

[a]Table key

M=Mentor C=Coworker S=Supervisor
R=Referents O=Observation T=Trial & Error
*GMI graduates use source more often.
+MSU graduates use source more often.

The more global perspective of managers is evidenced in that they reported using every source for at least one content domain and gathered information from all content areas to a greater extent than the engineers. Supervisors and objective referents were the primary sources consulted for information concerning all content domains. This finding may be due in part to a confound between school and occupation. That is, more managers were MSU graduates. However, managers supplemented the use of supervisors and objective referents with the use of trial and error for group and organizational information and the sporadic use of mentors, coworkers, and observation for other content areas. The strategy of managers seems to be to collect as much information as possible from as many sources as possible to develop and maintain a more cosmopolitan perspective. While not the most expedient or efficient strategy, it may result in more organizationally aware and acclimated employees, especially when managers are compared to engineers.

Analysis of information seeking strategy differences by gender. A separate breakdown analysis examined differences in the information seeking behavior of males and females. Results, shown in Table 5, demonstrated that males used supervisors as a source more often than females to obtain information about the role, group, and organization domains. Females reported using the objective sources more frequently than males for all content domains. Specifically, females used objective referents to learn about the task, group and organizational domains, observation to learn about role and group, and trial and error to learn about task, role and group. Females reported employing mentors only to learn about the company's norms and values. These results reveal that although males relied primarily upon a single source, the supervisor, females selectively used a variety of sources depending on the content domain. One

Table 4
Differential Use of Information Sources:
Management vs. Engineering[a]

Type of Information	Source of Information					
	M	C	S	R	O	T
TASKS:						
tasks, duties, assignments				*		*
how to deal with red tape						
standard operating procedures			*	*		
priority of tasks		*		*	*	
how to perform tasks & duties			*	*		
how to handle problems			*	*		
where to obtain information for job				*	*	
how to use equipment or tools for job			*			
ROLE:						
how to fit in company			*			
how much can make own rules					*	
when can act alone						
how to act		*	*	*		
what responsibilities are				*		
what is expected on job			*	*		
how much can define own tasks				*		
how much authority to do job			*	*		
GROUP:						
how to act & behave in group			*			
how to get along with coworkers			*			
group members with status			*			*
role of group in organization				*		*
how work is done in group				*		
group belief re quantity & quality of work			*	*		
how coworkers feel about job			*	*		*
atmosphere of interpersonal relations			*	*		
ORGANIZATION:						
goals & objectives of organization			*	*		
who has power in company			*			*
organizational policies, procedures, rules					*	
management's beliefs re workers				*		*
norms & values of company	*	*	*	*		*
special language of company			*			
channels of authority				*		*
ropes for getting ahead			*			
organizational legends, myths, & stories						

[a]Table key

M=Mentor C=Coworker S=Supervisor
R=Referents O=Observation T=Trial & Error

*Managers use source more often.

probable explanation for the self-reliant strategies exhibited by women is that they feel more pressure to perform well on their own in the male-dominated business world. It is important for them to appear independent and knowledgeable, therefore they avoid over utilizing the personal sources. Males, on the other hand, may simply be taking advantage of one of the most readily available sources, supervisors.

Analysis of information seeking strategy differences by mentor. The final learning strategy breakdown was performed on newcomers with and without mentors. Results, shown in Table 6, revealed that those with mentors did not report using any source more frequently than those without mentors. The non-mentored newcomers reported using coworkers and observation more often than mentored newcomers to learn about the task and organization. They also reported using coworkers in the role domain to learn what is expected on the job. Since non-mentored newcomers do not have one special source to rely upon it makes sense that they would make more frequent use of the other sources.

Who in the organizational setting initiates learning?

Analysis of initiation of learning by college. The next set of breakdowns addressed the third research question related to the initiation of learning in the four subpopulations. In the GMI vs. MSU analysis, MSU graduates reported that supervisors more frequently initiated learning about task, role, group and organization. Similarly, MSU newcomers also reported that coworkers more consistently initiated learning about task, role and organization. These results are probably an indication that company agents viewed MSU newcomers as requiring more assistance than GMI initiates. Supervisors and coworkers recognized the need to take the initiative in educating the more naive MSU graduates. Organizational incumbents were not required to be as proactive with the GMI

Table 5
Differential Use of Information Sources:
Males vs. Females[a]

Type of Information	Source of Information					
	M	C	S	R	O	T
TASKS:						
tasks, duties, assignments				+		+
how to deal with red tape						
standard operating procedures				+		
priority of tasks						+
how to perform tasks & duties				+		
how to handle problems						
where to obtain information for job						+
how to use equipment or tools for job						
ROLE:						
how to fit in company						+
how much can make own rules						
when can act alone						
how to act			*			
what responsibilities are						
what is expected on job					+	+
how much can define own tasks						
how much authority to do job						
GROUP:						
how to act & behave in group						+
how to get along with coworkers			*			+
group members with status					+	
role of group in organization						
how work is done in group				+		
group belief re quantity & quality of work						
how coworkers feel about job			*			
atmosphere of interpersonal relations					+	
ORGANIZATION:						
goals & objectives of organization					+	
who has power in company						
organizational policies, procedures, rules					+	
management's beliefs re workers						
norms & values of company		+				
special language of company						
channels of authority						
ropes for getting ahead			*			
organizational legends, myths, & stories			*			

[a]Table key

M=Mentor C=Coworker S=Supervisor
R=Referents O=Observation T=Trial & Error
*Males use source more often.
+Females use source more often.

Table 6
Differential Use of Information Sources:
Mentored vs. Non-Mentored[a]

Type of Information	Source of Information					
	M	C	S	R	O	T
TASKS:						
tasks, duties, assignments						
how to deal with red tape		*			*	
standard operating procedures						
priority of tasks						
how to perform tasks & duties						
how to handle problems						
where to obtain information for job		*				
how to use equipment or tools for job						
ROLE:						
how to fit in company						
how much can make own rules						
when can act alone						
how to act						
what responsibilities are						
what is expected on job		*				
how much can define own tasks						
how much authority to do job						
GROUP:						
how to act & behave in group						
how to get along with coworkers						
group members with status						
role of group in organization						
how work is done in group						
group belief re quantity & quality of work						
how coworkers feel about job						
atmosphere of interpersonal relations						
ORGANIZATION:						
goals & objectives of organization						
who has power in company						
organizational policies, procedures, rules					*	
management's beliefs re workers		*				
norms & values of company					*	
special language of company					*	
channels of authority		*				
ropes for getting ahead						
organizational legends, myths, & stories						

Table Key[a]

M=Mentor C=Coworker S=Supervisor
R=Referents O=Observation T=Trial & Error

*Non-Mentored use source more often.

initiates given that group's prior experience and use of effective learning strategies.

Analysis of initiation of learning by major. In the breakdown analysis examining the proactiveness of sources in the management vs. engineering group, managers reported that supervisors initiated learning about task, role and organization. Engineers indicated that none of the sources were more likely to initiate learning for any content domain. Considering that the majority of managers were MSU graduates, this result is not surprising. Again, these managers probably displayed more naivete than the engineers, prompting supervisors to be more proactive in helping them to adapt. Another explanation is that the task, role, and organizational aspects of an engineer's job are much more obvious than they are in a managerial job. Engineers have well defined organizational roles that require completing more concrete tasks. Managers, on the other hand, have duties where standard rules and procedures often do not apply, making assistance in adjusting to that job necessary.

Analysis of initiation of learning by gender and mentor. Breakdown analyses revealed no significant differences in initiation of learning for gender or mentor.

How does socialization affect the knowledge level of newcomers?

Analysis of knowledge differences by college. After exploring the process by which newcomers acquired information, analyses were conducted to answer the fourth research question by examining knowledge differences.[2] In the breakdown comparing the knowledge of GMI vs. MSU graduates, GMI graduates reported greater knowledge of task and role. This finding is not surprising given this group's greater amount of prior experience and the self-reliant learning strategies they

[2]Items in each content domain were averaged for these analyses.

reported. This result exemplifies the value of cooperative education in preparing graduates to become functional organizational members more quickly. The finding is also an indication of the superiority of self-reliant information gathering strategies that differentiate among best sources to tap for specific types of knowledge, such as those used by GMI newcomers.

Analysis of knowledge differences by major. The breakdown examining knowledge differences between managers and engineers revealed that managers have greater knowledge of the organization. This is consistent with the learning strategy results in that managers more frequently used a wider variety of sources to learn about the organization than did engineers. The result may also be an illustration of the greater importance of the organization as a whole to managers. Their jobs require an organizationally global perspective.

Analysis of knowledge differences by gender. The relative knowledge of males and females was compared in a separate breakdown analysis. Females reported greater knowledge of role, group, and organization. This makes sense given that females more frequently employed objective sources and sampled a wider variety of content domains than males. It seems that females learned more than males by trying to find things out for themselves. The content domains in which females reported being more knowledgeable also tended to be person oriented. Previous research has shown that females are more interpersonally sensitive than males.

Analysis of knowledge differences by mentor. There were no significant differences in the breakdown analysis comparing the reported knowledge of mentored and non-mentored newcomers.

What are the outcomes of the socialization process?

Successful socialization typically results in outcomes such as adjustment and reduced stress. To address the final research question concerning the

socialization outcomes of the study's four subpopulations, a final set of breakdown analyses were conducted. All subgroups were compared with regard to the following outcomes: adjustment, organizational commitment, stress, performance, intention to turnover, and satisfaction. Significant differences were found only for the first three outcomes listed above.

Analysis of socialization outcome differences by college. The analysis of outcomes for GMI and MSU newcomers revealed that GMI graduates were more adjusted. This result is consistent with previously discussed findings related to GMI's prior experience, learning strategies, and greater knowledge. Better prepared newcomers who adopt more successful information gathering techniques are expected to experience greater adjustment.

MSU graduates reported being more committed to the organization than GMI graduates. While true commitment is valuable to the organization, MSU graduates may simply be more naive than truly loyal. MSU graduates enter their first jobs relatively inexperienced. As they become better adjusted and more knowledgeable their perspectives may become more instrumental in orientation. That is, they may begin to view the organization as a training ground that will lead to future opportunities, a more realistic perspective for individuals in their very first important job.

Analysis of socialization outcome differences by gender. In the breakdown analysis comparing socialization outcomes of males and females, women reported experiencing more stress. As previously discussed, females employed objective, self-reliant, learning strategies, probably because of self-induced pressures to perform well and appear independent in the male-dominated workplace. This same pressure is likely to cause them to feel more stress. Despite the stress, women still reported being more knowledgeable than males in three content domains.

Analysis of socialization outcome differences by major and mentor. There were no significant differences in the socialization outcomes of the management vs. engineering and the mentored vs. non-mentored groups.

SUMMARY

The Early Careers Study was an investigation of the organizational socialization and assimilation processes experienced by college graduates beginning their working careers. Differences in the patterns of socialization were compared for new hires from a traditional vs. a cooperative educational institution, for managers vs. engineers, for mentored vs. non-mentored newcomers, and for men vs. women. Data analyses were conducted to address five major research questions: a) What changes does socialization bring across time? b) What sources and content domains do newcomers sample to learn more about organizational life? c) Who in the organizational setting initiates learning? d) How does socialization affect the knowledge level of newcomers? e) What are the outcomes of the socialization process?

The most interesting results were related to the GMI vs. MSU and management vs. engineering subgroups. GMI graduates reported using more effective learning techniques, exemplified by the use of a variety of sources and differentiating among them according to the content domain being explored. The effectiveness of these techniques was then evidenced in GMI student reports of greater knowledge and adjustment. MSU graduates relied on organizationally sanctioned sources and reported more proaction from supervisors and coworkers. The cooperative experience of GMI graduates appeared to better prepare them to assume a functional role more quickly in their new organizations. MSU graduates entered their new positions relatively more naive and less experienced.

Managers reported utilizing more sources, sampling more content domains, and

having more proactive supervisors than engineers. As a result, managers also reported having more knowledge about the organization than engineers. Although managers did not employ the most efficient learning strategies, the results suggest that they were at least somewhat effective. Shortcomings in the education of engineers may be responsible for their apparent lack of involvement in learning the organizational ropes.

The analyses of the male vs. female subgroups also yielded some interesting findings. Females employed primarily objective sources of information, while males relied on supervisors. Females reported greater knowledge than males in three content domains. These findings may be attributable to women feeling more pressure to be independent and perform well in a male-dominated organizational setting. The greater amount of stress experienced by females is consistent with this interpretation.

The practical implications of these findings are clear. First, the significant value of cooperative education has been demonstrated. GMI graduates profited form their cooperative experiences by acquiring more effective learning strategies, accruing greater knowledge, and adjusting to organizational life more effectively. By providing more cooperative internship experiences, universities could better prepare graduates for their future careers. Similarly, organizations would be rewarded for their participation by creating a more qualified applicant pool from which to recruit and select new employees.

Results demonstrated that newcomers who are better prepared for their careers become functional organizational members more quickly. College placement offices could provide graduates with a realistic preview by offering orientation programs designed to familiarize initiates with those aspects of organizational life that will be most important for success. Such programs should focus on sharpening

learning skills and teaching initiates how to adapt in the organizational setting.

The results also recommended improvements in the engineering curricula. In this study, engineers were less organizationally aware than managers. To eliminate this deficit, additional emphasis must be placed on interpersonal and communication skills for engineering graduates. The narrow focus of engineers must be expanded if they are to be more valuable, and perhaps more committed, organizational members.

Finally, results demonstrated that to effectively intervene in newcomer socialization, organizations must act within the first few days or weeks of employment. Efforts should be made, through training, to assist newcomers in the learning process. Helping new employees learn more effective information gathering strategies should be the focus of training.

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Appendix A

Socialization Information Acquisition Items Clustered by Content Domain

Task Domain

What the important tasks, duties, and assignments for my job are
How to deal effectively with "red tape"
What the standard operating procedures for my job are
The priority of my various tasks and assignments
How to perform basic tasks and duties correctly
How to handle routine problems or difficulties for my job
Where (or who) to obtain important information for my job from
How to use equipment or tools needed for my job

Role Domain

How to "fit in" the company
How much I can make up my own rules or ways of doing my job
When I can act alone and when I need approval
How to act when I'm at work
What my responsibilities are
What is expected of me on the job besides performing my tasks well
How much I can define or modify my tasks and duties
How much authority I have to accomplish job

Group Domain

How to act and behave with my group
How to get along with my coworkers
What group members have status, are important, or are respected
The role of my work group in the mission of the organization--how it "fits in"
Who does what and in what order--how work is done in my group
Work group members' beliefs about the appropriate quantity and quality of work
How coworkers feel about various aspects of the job
The atmosphere of interpersonal relations within the group

Organizational Domain

The goals and objectives of the organization
Who has real power in the company
What the organization's policies, procedures, and rules are
Management's beliefs about the needs of work groups and employees
What the important norms and values for the company are
The special language or jargon used in the company
What the channels of authority are in the organization
The ropes for getting ahead in the company
What the key legends, myths, and stories about the organization are